



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

[Handwritten Signature]

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/787,477	02/26/2004	Richard D. Dettinger	ROC920040002US1	7008

46797 7590 04/03/2007
IBM CORPORATION, INTELLECTUAL PROPERTY LAW
DEPT 917, BLDG. 006-1
3605 HIGHWAY 52 NORTH
ROCHESTER, MN 55901-7829

EXAMINER

DARNO, PATRICK A

ART UNIT	PAPER NUMBER
----------	--------------

2163

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)
	10/787,477	DETTINGER ET AL.
Examiner	Art Unit	
Patrick A. Darno	2163	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 16 January 2007.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-30 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-30 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 26 February 2004 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) Paper No(s)/Mail Date. ____.
3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date 5) Notice of Informal Patent Application
6) Other: ____.

DETAILED ACTION

1. No new claims have been added. Claims 1, 12, 18, and 19-27 have been amended.

Therefore, claims 1-30 are pending in this office action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 6,366,915 issued to Amy Rubert et al. (hereinafter “Rubert”) in further view of U.S. Patent Application Publication Number 2003/0172082 issued to Jeffrey Benoit et al. (hereinafter “Benoit”).

Claim 1:

Rubert discloses a computer-implemented method for scheduling execution of units of work, comprising:

determining a cost to execute a unit of work (*Rubert: column 14, lines 4-14; The Rubert reference clearly shows determining if a query is a 'high-impact query'. This involves calculating the 'cost' of a query. Furthermore it should be known for the record that the Applicant clearly stated that determining the 'cost' of a query is well known in the art in paragraph [0034] of the Applicant's specification.*);

determining a plurality of scheduling options for future execution of the unit of work on the basis of the cost (*Rubert: column 10, line 57 - column 11, line 4 and column 2, lines 26-36; Note particularly that future scheduling is based on how high the cost (high impact = high cost) of a query is.*), wherein

determining the plurality of scheduling options comprises restricting a larger set of scheduling options to the determined scheduling options, whereby the scheduling options available for selection by a user are restricted as a result of the determined cost (*Rubert: column 10, line 57 - column 11, line 4 and column 2, lines 26-36*).

Rubert does not explicitly disclose wherein the query scheduling options are user-selectable; and returning the plurality of user-selectable scheduling options to a user interface for display to a user. However, Benoit discloses wherein the query scheduling options are user-selectable (*Benoit: paragraph [0016], lines 3-5 and paragraph [0045] and Fig. 9*); and returning the plurality of user-selectable scheduling options to a user interface for display to a user (*Benoit: Fig. 9*).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Rubert with the teachings of Benoit noted above. The skilled artisan would have been motivated to improve the teachings of Rubert per the above such that a user interface provides the user with flexibility to set saved queries to execute at a scheduled time interval (*Benoit: paragraph [0016], lines 1-5 and Fig. 9*).

Claim 2:

The combination of Rubert and Benoit discloses all the elements of claim 1, as noted above, and Rubert further discloses wherein the unit of work is a query (*Rubert: column 2, lines 57-61*).

Claim 3:

The combination of Rubert and Benoit discloses all the elements of claim 1, as noted above, and Rubert further discloses wherein the unit of work is an analysis routine (*Rubert: column 2, lines 57-61; A query is an analysis routine. The Applicant clearly defines an analysis routing in paragraph*

[0026], lines 29-32 of the Applicant's Specification. This definition states that an analysis routine is "any unit of work performed with respect to the data in the database". Surely a query is a unit of work performed with respect to the data in the database.).

Claim 4:

The combination of Rubert and Benoit discloses all the elements of claim 1, as noted above, and Benoit further discloses displaying the returned plurality of user-selectable scheduling options to user via a menu in the user interface (Benoit: Fig. 9, 904).

Claim 5:

The combination of Rubert and Benoit discloses all the elements of claim 1, as noted above, and Benoit further discloses:
receiving a user selection from the plurality of user-selectable scheduling options (Benoit: paragraph [0045] and Fig. 9, 904; Note specifically "execute automatically at a frequency set by the user". Surely there is some means to receive a user selection is the user uses the interface menu to 'set' a schedule of execution of a query.); and

storing a schedule for the unit of work on the basis of the user selection (Benoit: paragraph [0045], lines 1-3).

Claim 6:

The combination of Rubert and Benoit discloses all the elements of claim 1, as noted above, and Benoit further discloses:

receiving a user selection from the plurality of user selectable scheduling options (Benoit: paragraph [0045] and Fig. 9, 904; Note specifically "execute automatically at a frequency set by the user". Surely

there is some means to receive a user selection is the user uses the interface menu to 'set' a schedule of execution of a query.);

storing a schedule for the unit of work on the basis of the user selection (*Benoit: paragraph [0045], lines 1-3*); and

repetitively executing the unit of work on the basis of the schedule (*Benoit: paragraph [0016], lines 3-5*).

Claim 7:

The combination of Rubert and Benoit discloses all the elements of claim 1, as noted above, and Rubert further discloses determining the cost to execute the unit of work comprises estimating a time required to execute the unit of work (*Rubert: column 14, lines 4-14; A high-impact query is a query with a high cost. One means of determining a high cost is amount of time it takes a query to run. Furthermore it is important to note the Applicant admitted that the estimation of the cost of a query is 'well-known' in the art in paragraph [0034] of the Applicant's Specification.*).

Claim 8:

The combination of Rubert and Benoit discloses all the elements of claim 1, as noted above, and Rubert further discloses wherein determining the cost to execute the unit of work is done on the basis of historical query execution times for previous executions of the unit of work (*Rubert: column 14, lines 4-14; Note specifically that the Rubert reference analyzes the 'empirical timing' of queries. The 'empirical timing' is an analysis of historical time values.*).

Claim 9:

The combination of Rubert and Benoit discloses all the elements of claim 1, as noted above, and Benoit further discloses wherein determining the plurality of user-selectable

scheduling options selecting a subset of user-selectable scheduling options from a predefined set of user-selectable scheduling options (*Benoit: paragraph [0045] and Fig. 9, 904; When the user selects a scheduling option in the Benoit reference, the user clearly selects a subset (at least one) from a menu full of user-selectable scheduling options.*).

Claim 10:

The combination of Rubert and Benoit discloses all the elements of claim 1, as noted above, and Rubert further discloses:

determining user parameters specific to the user (*Rubert: column 4, lines 8-19*); and determining the plurality of scheduling options for future execution of the unit of work on the basis of the cost and the user parameters (*Rubert: column 4, lines 8-19 and column 10, lines 57-column 11, line 4 and column 2, lines 26-36; The user parameters are considered at the beginning of the query scheduling process.*).

Rubert does not explicitly disclose wherein the query scheduling options are user-selectable. However, Benoit discloses wherein the query scheduling options are user-selectable (*Benoit: paragraph [0016], lines 3-5 and paragraph [0045] and Fig. 9*).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Rubert with the teachings of Benoit noted above. The skilled artisan would have been motivated to improve the teachings of Rubert per the above such that a user interface provides the user with flexibility to set saved queries to execute at a scheduled time interval (*Benoit: paragraph [0016], lines 1-5 and Fig. 9*).

Claim 11:

The combination of Rupert and Benoit discloses all the elements of claim 10, as noted above, and Rupert further discloses wherein the user parameters include at least one of a user status of the user and other units of work already scheduled for execution by the user (*Rupert: column 4, lines 8-19 and column 10, lines 57-67; The first reference considers the users status when the system determines is the user has access to a certain database. And the second reference clearly shows that the system considers the units of work (queries) that are already scheduled.*).

Claim 12:

A computer-implemented method for scheduling units of work, comprising:
determining a cost to execute a unit of work (*Rupert: column 14, lines 4-14; The Rubert reference clearly shows determining if a query is a 'high-impact query'. This involves calculating the 'cost' of a query. Furthermore it should be known for the record that the Applicant clearly stated that determining the 'cost' of a query is well known in the art in paragraph [0034] of the Applicant's specification.*);
determining a system availability to execute the unit of work (*Rupert: column 14, lines 4-14 and column 2, lines 26-36*);
determining a plurality of scheduling options for future execution of the unit of work on the basis of the cost and system availability (*Rupert: column 10, line 57 - column 11, line 4 and column 2, lines 26-36; Note particularly that future scheduling is based on how high the cost (high impact = high cost) of a query is.*), wherein determining the plurality of scheduling options comprises restricting a larger set of scheduling options to the determined scheduling options, whereby the scheduling options available for selection by a user are restricted as a result of the determined cost (*Rupert: column 10, line 57 - column 11, line 4 and column 2, lines 26-36*).

Rubert does not explicitly disclose wherein the query scheduling options are user-selectable; and returning the plurality of user-selectable scheduling options to a user interface for display to a user. However, Benoit discloses wherein the query scheduling options are user-selectable (*Benoit: paragraph [0016], lines 3-5 and paragraph [0045] and Fig. 9; and returning the plurality of user-selectable scheduling options to a user interface for display to a user (Benoit: Fig. 9)*).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Rubert with the teachings of Benoit noted above. The skilled artisan would have been motivated to improve the teachings of Rubert per the above such that a user interface provides the user with flexibility to set saved queries to execute at a scheduled time interval (*Benoit: paragraph [0016], lines 1-5 and Fig. 9*).

Claim 13:

The combination of Rubert and Benoit discloses all the elements of claim 12, as noted above, and Rubert further discloses wherein determining system availability to execute the unit of work comprises accessing a query schedule having entries defined for a plurality of different units of work (*Rubert: column 4, lines 4-7 and column 14, lines 4-14 and column 2, lines 26-36; Surely if the system executes a scheduled query, the system accesses a query schedule.*).

Claim 14:

The combination of Rubert and Benoit discloses all the elements of claim 12, as noted above, and Benoit further discloses:

receiving a user selection from the plurality of user selectable scheduling options (*Benoit: paragraph [0045] and Fig. 9, 904; Note specifically "execute automatically at a frequency set by the user". Surely*

there is some means to receive a user selection is the user uses the interface menu to 'set' a schedule of execution of a query.);

storing a schedule for the unit of work on the basis of the user selection (*Benoit: paragraph [0045], lines 1-3*); and

repetitively executing the unit of work on the basis of the schedule (*Benoit: paragraph [0016], lines 3-5*).

Claim 15:

The combination of Rubert and Benoit discloses all the elements of claim 12, as noted above, and Rubert further discloses wherein determining the cost to execute the unit of work comprises estimating a time required to execute the unit of work (*Rubert: column 14, lines 4-14; A high-impact query is a query with a high cost. One means of determining a high cost is amount of time it takes a query to run. Furthermore it is important to note the Applicant admitted that the estimation of the cost of a query is 'well-known' in the art in paragraph [0034] of the Applicant's Specification.*).

Claim 16:

The combination of Rubert and Benoit discloses all the elements of claim 12, as noted above, and Rubert further discloses wherein determining the cost to execute the unit of work is done on the basis of historical query execution times for previous executions of the unit of work (*Rubert: column 14, lines 4-14; Note specifically that the Rubert reference analyzes the 'empirical timing' of queries. The 'empirical timing' is an analysis of historical time values.*).

Claim 17:

The combination of Rubert and Benoit discloses all the elements of claim 12, as noted above, and Benoit further discloses wherein determining the plurality of user-selectable

scheduling options selecting a subset of user-selectable scheduling options from a predefined set of user-selectable scheduling options (*Benoit: paragraph [0045] and Fig. 9, 904; When the user selects a scheduling option in the Benoit reference, the user clearly selects a subset (at least one) from a menu full of user-selectable scheduling options.*).

Claim 18:

Rubert discloses a computer readable storage medium containing a program which, when executed, performs an operation for scheduling execution of units of work, the operation comprising:

determining a cost to execute a unit of work (*Rubert: column 14, lines 4-14; The Rubert reference clearly shows determining if a query is a 'high-impact query'. This involves calculating the 'cost' of a query. Furthermore it should be known for the record that the Applicant clearly stated that determining the 'cost' of a query is well known in the art in paragraph [0034] of the Applicant's specification.*);

determining a plurality of scheduling options for future execution of the unit of work on the basis of the cost (*Rubert: column 10, line 57 - column 11, line 4 and column 2, lines 26-36; Note particularly that future scheduling is based on how high the cost (high impact = high cost) of a query is.*), wherein determining the plurality of scheduling options comprises restricting a larger set of scheduling options to the determined scheduling options, whereby the scheduling options available for selection by a user are restricted as a result of the determined cost (*Rubert: column 10, line 57 - column 11, line 4 and column 2, lines 26-36*).

Rubert does not explicitly disclose wherein the query scheduling options are user-selectable; and returning the plurality of user-selectable scheduling options to a user interface for display to a user. However, Benoit discloses wherein the query scheduling options are user-

selectable (*Benoit: paragraph [0016], lines 3-5 and paragraph [0045] and Fig. 9*); and returning the plurality of user-selectable scheduling options to a user interface for display to a user (*Benoit: Fig. 9*).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Rubert with the teachings of Benoit noted above. The skilled artisan would have been motivated to improve the teachings of Rubert per the above such that a user interface provides the user with flexibility to set saved queries to execute at a scheduled time interval (*Benoit: paragraph [0016], lines 1-5 and Fig. 9*).

Claim 19:

The combination of Rubert and Benoit discloses all the elements of claim 18, as noted above, and Rubert further discloses:

determining system availability to execute the unit of work (*Rubert: column 14, lines 4-14 and column 2, lines 26-36*); and

determining a plurality of scheduling options for future execution of the unit of work on the basis of the cost and system availability (*Rubert: column 10, lines 57-67 and column 2, lines 26-36*;
Note particularly that future scheduling is based on how high the cost (high impact = high cost) of a query is.).

Rubert does not explicitly disclose wherein the query scheduling options are user-selectable. However, Benoit discloses wherein the query scheduling options are user-selectable (*Benoit: paragraph [0016], lines 3-5 and paragraph [0045] and Fig. 9*).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Rubert with the teachings of Benoit noted above. The skilled artisan would have been motivated to improve the teachings of Rubert per the above such

that a user interface provides the user with flexibility to set saved queries to execute at a scheduled time interval (*Benoit: paragraph [0016], lines 1-5 and Fig. 9*).

Claim 20:

The combination of Rubert and Benoit discloses all the elements of claim 18, as noted above, and Benoit further discloses displaying the returned plurality of user-selectable scheduling options to user via a menu in the user interface (*Benoit: Fig. 9, 904*).

Claim 21:

Claim 21 is rejected under the same reasons set forth in the rejection of claims 10 and 11.

Claim 22:

Claim 22 is rejected under the same reasons set forth in the rejection of claim 5.

Claim 23:

Claim 23 is rejected under the same reasons set forth in the rejection of claim 6.

Claim 24:

Claim 24 is rejected under the same reasons set forth in the rejection of claim 7.

Claim 25:

Claim 25 is rejected under the same reasons set forth in the rejection of claim 8.

Claim 26:

Claim 26 is rejected under the same reasons set forth in the rejection of claim 9.

Claim 27:

Rubert discloses a computer system, comprising:

a schedule indicating when units of work are to be executed (*Rubert: column 10, lines 57-67*);
a scheduler configured to:

determine a cost to execute a unit of work (*Rubert: column 14, lines 4-14; The Rubert reference clearly shows determining if a query is a 'high-impact query'. This involves calculating the 'cost' of a query. Furthermore it should be known for the record that the Applicant clearly stated that determining the 'cost' of a query is well known in the art in paragraph [0034] of the Applicant's specification.*);

determine a plurality of scheduling options for repetitive execution of the unit of work on the basis of the cost (*Rubert: column 10, line 57 - column 11, line 4 and column 2, lines 26-36; The first reference clearly shows that Rubert suggests scheduling queries so that they can run repetitively. The second reference clearly shows that future scheduling is based on how high the cost (high impact = high cost) of a query is.*), wherein determining the plurality of scheduling options comprises restricting a larger set of scheduling options to the determined scheduling options, whereby the scheduling options available for selection by a user are restricted as a result of the determined cost (*Rubert: column 10, line 57 - column 11, line 4 and column 2, lines 26-36*).

Rubert does not explicitly disclose wherein the query scheduling options are user-selectable; and returning the plurality of user-selectable scheduling unit of work to a user interface for display to a user. However, Benoit discloses wherein the query scheduling options are user-selectable (*Benoit: paragraph [0016], lines 3-5 and paragraph [0045] and Fig. 9*); and returning the plurality of user-selectable unit of work to a user interface for display to a user (*Benoit: Fig. 3*).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Rubert with the teachings of Benoit noted above. The skilled artisan would have been motivated to improve the teachings of Rubert per the above such that a user interface provides the user with flexibility to set saved queries to execute at a scheduled time interval (*Benoit: paragraph [0016], lines 1-5 and Fig. 9*).

Claim 28:

The combination of Rubert and Benoit discloses all the elements of claim 27, as noted above, and Rubert further discloses a database against which the units of work are executed (*Rubert: column 2, lines 57-64*).

Claim 29:

The combination of Rubert and Benoit discloses all the elements of claim 27, as noted above, and Rubert further discloses wherein the unit of work is query (*Rubert: column 2, lines 57-64*).

Claim 30:

The combination of Rubert and Benoit discloses all the elements of claim 27, as noted above, and Rubert further discloses wherein the unit of work is an analysis routine (*Rubert: column 2, lines 57-67; A query is an analysis routine. The Applicant clearly defines an analysis routing in paragraph [0026], lines 29-32 of the Applicant's Specification. This definition states that an analysis routine is "any unit of work performed with respect to the data in the database". Surely a query is a unit of work performed with respect to the data in the database.*).

Response to Arguments

Applicant Argues:

For example, Rubert does not teach determining a plurality of user-selectable scheduling options for future execution of the unit of work on the basis of cost (and system availability, in the case of claim 12), as suggested by the Examiner. The Examiner suggests that Rubert teaches determining a plurality of scheduling options for future execution of the unit of work on the basis of a cost at column 10, lines 57-67. In fact, the cited portion of Rubert makes no such disclosure. Rather, the cited portion merely teaches that, if a database server has insufficient processing power to perform query execution at the current time, the system "can contact the user in order to schedule query execution for a later time". (See also, column 3, lines 13-14: "if current query execution is needed but not available, the system can alert the user to try again later.") Thus, Rubert merely teaches that a user can schedule a query for later execution if the system currently has insufficient processing power.

Examiner Responds:

Examiner is not persuaded. It is important to note that the Examiner rejected the claims under 35 U.S.C. 103(a). The Examiner mapped the claims above such that it is clear that Rubert teaches determining a plurality of scheduling options for future execution of the unit of work on the basis of cost (*Rubert: column 10, line 57 - column 11, line 4 and column 2, lines 26-36*). Further, the Examiner clearly showed that the Benoit reference discloses user-selectable scheduling options (*Benoit: paragraph [0016], lines 3-5 and paragraph [0045] and Fig. 9*). Under 35 U.S.C. 103(a), the prior art references when combined must teach or *at least suggest* all claim limitations. Since the motivation to combine the references was not challenged, the combination of references is presumed valid. The Examiner remains convinced that the combination of references discloses all elements of the Applicant's claimed invention.

Specifically, it appears the Applicant argues that the combination of references fails to disclose wherein the query scheduling options are suggested based upon the cost of a query. However, the Examiner has clearly pointed out in the preceding office action that query scheduling options are suggested based upon the cost of a query (*Rubert: column 10, line 57 - column 11, line 4 and column 2, lines 26-36*).

The cost of a query is defined as something used to estimate the runtime cost of evaluating the query, in terms of the number of I/O operations required, the CPU requirements, and other factors (see 'query optimizer' at www.wikipedia.com). Rubert discloses high-impact queries as queries requiring significant processing by the database server in order to execute the query. In light of the definition of cost above, which is very well known in the art, it is clear that

a high-impact query is a high cost query. And the Rupert reference only suggests re-scheduling a query if the query is a high-impact query (i.e., the query has a high cost). The cited portion of the Rubert reference is now reproduced with emphasis added in order to clarify the portions relevant to the rejection:

Some types of queries, referred to as high-impact queries, require significant processing by the database server in order to execute the query. Thus, only a limited number of high-impact queries may be allowed to be executed at a single time. In one embodiment, the determination of whether the database server has sufficient processing power is made by restricting the number of high-impact queries (e.g., only one) which can execute simultaneously. If the database server cannot execute the query at the current time, the Query Executor can delay the execution of the query. For example, the Query Executor could automatically execute the query at a later time when the database server can execute the query, or the Query Executor can contact the user in order to schedule query execution for a later time. If the query is instead a low-impact query that can be executed quickly and with little cost in database server processing power, the Query Executor can execute the query without first determining the status of the database server. (Rubert: column 10, line 57 - column 11, line 4)

If the explanation above was not clear enough to prove that Rubin discloses determining scheduling options for a query based on cost, then the text of Rubin can surely finalize this issue. Specifically, as emphasized above, Rubin states that low-impact queries that can be executed "with little cost in database server processing power" are executed. Furthermore, as noted many times above, scheduling options are provided to the user for re-scheduling high-impact or high cost queries at some future time.

Finally, the Applicant further argues that system availability is not considered when deciding to re-schedule a query. However, it is clear that, at the very least, 'database server

processing power' is considered. Surely the consideration of 'database server processing power' is the consideration of system availability.

In light of the preceding office action, and the comments given by the Examiner, it is abundantly clear that the cited combination of references, at the very least, suggests every element of the Applicants claimed invention. Therefore, the rejections given under 35 U.S.C. 103(a) are upheld by the Examiner.

Applicant Argues:

Rubert does not teach, or suggest, that the system determines a plurality of scheduling options for future execution of the query on the basis of the cost of executing the query, as suggested by the Examiner. To the contrary, the suggestion is that the user of Rubert is given the same set of options each time query execution is unavailable at "the current time". These options are not restricted/determined based on the cost of a query, or anything else for that matter. In other words, the scheduling options are not dynamically determined on any basis, cost or otherwise – the same options (if any) are merely retrieved and displayed to the user via the "IR System Interface" (see, column 9, lines 61-66) for each query that cannot be executed immediately. Whether a query is a high-impact query, then, merely affects whether that query can be executed at the current time – it has nothing to do with determining the scheduling options.

Examiner Responds:

Examiner is not persuaded. The previously cited portion of the reference reproduced above clearly suggests presenting scheduling options to the user based upon the cost of a query. This fact was been more than adequately proven above.

Furthermore, taking the cited portion of the Rubert reference and the claims and giving them their broadest reasonable interpretation clearly shows that all elements of the claimed invention are present in the reference. The option to schedule a high-cost query at a future point presents the user with a 'larger set' of scheduling options which includes anytime in the

future. Therefore, there is the option of every hour, every week, every month, and every year in the future as a possible scheduling options, etc. The user further restricts these scheduling options to one or more scheduling option(s) which will adequately support the high-cost query. Since every query, and every situation is different, it is clear that the user dynamically decides which scheduling options best fit the current situation. This interpretation reasonably anticipates each and every element of the Applicant's claimed invention.

In light of the preceding office action, and the comments given by the Examiner, it is abundantly clear that the cited combination of references, at the very least, suggests every element of the Applicants claimed invention. Therefore, the rejections given under 35 U.S.C. 103(a) are upheld by the Examiner.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

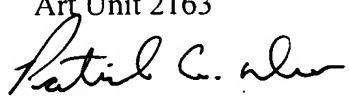
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick A. Darno whose telephone number is (571) 272-0788. The examiner can normally be reached on Monday - Friday, 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Patrick A. Darno
Examiner
Art Unit 2163

PAD



DON WONG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100